

REMARKS

The Interview

An interview was conducted on February 2, 2006 with the handling examiner and his supervisor. Mr. Egan and Tony Misslin participated on behalf of the Applicants. U.S. Patent No. 5,221,152 (Fishbine et al.) and U.S. Patent No. 6,320,974 (Glaze et al.) and the subject matter of the independent claims, particularly claim 1, were discussed. The examiners' courtesy in granting the interview is appreciated.

Examiner's Response To Arguments

Applicants' arguments, in their prior response, did not simply address Fishbine et al. Rather, the combination of Fishbine et al. and Glaze et al. were dealt with.

Additionally, the Examiner's reliance on Glaze et al.'s Abstract is misplaced. As discussed below, the systems of Fishbine et al. and Glaze et al. are fundamentally different from Applicants' claimed invention. The combination of these two systems would not have rendered Applicants' invention obvious.

The examiner agreed that taking Official Notice that the subject matter of dependent claims 4, 15, 22, 24 and 26 was well known was improper. The examiner now cites a block of patents, but does not apply them to these claims. Instead, the examiner has again taken Official Notice that the subject matter of these claims is well known. See paragraphs 3, 7 and 9 of the final Office Action. The examiner, if he wishes to maintain these claim rejections, must explain how the prior art would have rendered these claims obvious.

The Claims

Claims 1-44 stand rejected as allegedly obvious over Fishbine et al. and Glaze et al., either alone or in combination with other references.

Please note that claim 44 has been canceled.

Applicants' Invention

Applicants' invention, in one configuration, is directed to a method of real time identification and verification of the identity of a person using a portable hand-held device. The method includes transmitting a fingerprint image that satisfies a predetermined quality level to a central processor for processing. The fingerprint image is processed to determine if there is matching fingerprint information in central data storage. Data from the central processor relating to the processed fingerprint image is received at the portable hand-held device, and the received data is displayed on a display of the hand-held device. The method may also include enhancing a captured fingerprint image prior to transmission to the central processor.

Applicants' invention, in another configuration, is directed to capturing a facial image using a portable handheld device. The facial image can be stored in temporary data storage of the portable hand-held device. The facial image is transmitted to a central processor for processing to determine if there is matching facial information in central data storage. After processing, data from the central processor relating to the processed facial image is received and then displayed on a display of the portable hand-held device.

Applicants' invention, in yet another configuration, is directed to a portable apparatus for identification and verification of a fingerprint. The apparatus includes a housing and a user interface for the housing. The user interface includes at least a display and a finger receiving surface to

receive an image of a fingerprint. A sensor, a processor, and a transmitter are located within the housing. The processor determines if a fingerprint image meets a minimum quality level. The transmitter transmits a fingerprint image to a central processor for identification and verification. The processor also receives data from the central processor relating to the processed fingerprint image, and the display is configured to display this data to a user of the apparatus.

The apparatus of Applicants' invention, in another configuration, may include a housing having an ergonomic handle that provides for one hand operation and command of the functions of the apparatus. A sensor, a processor, and a transmitter are located within the housing of the apparatus. A module within the processor can enhance a fingerprint image prior to transmittal of the image.

The Art

Fishbine et al. is directed to a portable fingerprint scanning apparatus 10 that can optically scan and record fingerprint images. The apparatus 10 includes a fingerprint scanner 12, a video camera 20, a video monitor 26, a transmitter 30 and a terminal 28. The fingerprint scanner 12 includes a finger prism 14 and an image recorder 18. The image recorder 18 is a video camera or a CCD array. Fingerprint images generated by the fingerprint scanner 12, that is, the video signal output of the image recorder 18, can be displayed on the video monitor 26 and transmitted by the transmitter 30 to a mobile unit (not shown) for further processing. (Col. 3, lines 19-22). Upon receiving a signal from the terminal 28, the mobile unit digitizes and processes the fingerprint image. (Col. 4, lines 42-45). After image processing and compression at the mobile unit, the image can be transmitted wirelessly to a base unit at a central location for identity verification using an automated fingerprint identification system, such as the FBI's National Crime Information Center

Network. (Col. 4, lines 45-51). The monitor 26 may also be used to preview a “mug shot” image generated by the camera 20. (Col. 4, lines 61-64).

Glaze et al. is directed to a distributed biometric identification system having a plurality of stand-alone workstations 10. Each workstation includes a biometric capture device 16, such as a fingerprint scanner or a camera, and a fingerprint and photo database 70. A workstation receives biodata, such as fingerprint data, through its fingerprint scanner and searches its database for information regarding the individual belonging to the scanned fingerprint. Thus, each individual workstation processes the fingerprint or biodata. Glaze et al. also teaches that periodically the fingerprint data is transmitted to a centralized INS server so that the server can update the databases of other workstations. The central server does not process a scanned fingerprint to determine if there is a match.

Applicants' Invention Would Not Have Been Obvious

The systems of Fishbine et al. and Glaze et al. are fundamentally different from Applicants' claimed invention. Thus, the combination of Fishbine et al. and Glaze et al. would not have rendered Applicants' claimed invention obvious.

Fishbine et al. does not disclose receiving data from a central processor relating to a processed fingerprint image and displaying that data on a display of a portable handheld device. Rather, in Fishbine et al., the fingerprint image information is processed at a central facility for identity verification using an automated fingerprint identification system. After that step, data relating to the processed fingerprint image is not sent back to the portable handheld unit for subsequent display. Instead, it is sent to the mobile unit, for example, a computer in a police squad car.

The individual workstations of Glaze et al. process fingerprint image information. The fingerprint image information is not transmitted to a central server for processing to determine if there is matching fingerprint information in central data storage. Instead, the central server provides a link from which processed fingerprint image information from one workstation may be shared with another. As a result, the workstations of Glaze et al. are updated with the latest information regarding apprehended individuals. The central server does not process fingerprint image information to determine if this is a match.

The examiner stated that Fishbine et al. discloses displaying data received from a central processor “on a display 26 of the portable handheld device.” The examiner also stated that Fishbine et al. “does not explicitly disclose receiving data from the central processor relating to the processed fingerprint, but such a limitation is implicitly disclosed if not inherent because the operator of the portable identification verification system must receive some sort of feedback from the central facility as to the identification of the fingerprint, otherwise the portable system is useless.” See, paragraph 3 of the final Office Action.

The examiner is correct that the operator of the portable fingerprint scanning apparatus must receive some sort of feedback from the central facility as to the identification of the fingerprint. However, in Fishbine et al., feedback from the central facility regarding the processed fingerprint image was not sent to the portable fingerprint scanning apparatus. Rather, it was sent to the mobile unit, for example, the computer in a police squad car.

The examiner is incorrect in his characterization of the display 26 of Fishbine et al. The portable fingerprint scanning apparatus of Fishbine et al. did not receive data from a central processor relating to a processed fingerprint image. The display 26 then, of course, could not have displayed such data. Rather, the display 26 of Fishbine et al. was used to display fingerprint images

generated by the fingerprint scanner 12 or “mug shot” images generated by the camera 20. (Col. 3, lines 19-22; col. 4, lines 61-64).

The deficiencies of Fishbine et al. are not cured by combining it with Glaze et al. Glaze et al. teaches that the individual workstations include the data needed to perform the biodata searches after biodata, such as a fingerprint image, is entered at the workstations and that the INS server periodically updates the workstations so that the workstations include the latest information regarding apprehended individuals. This is unlike Applicants’ claimed invention because instead of transmitting the biodata to the server for match processing, Glaze et al. teaches that the workstations process the biodata for matches. Moreover, Glaze et al. fails to teach or suggest receiving data from the server relating to processed biodata by the server because Glaze et al. does not teach that the biodata is transmitted to the server for match processing. Rather, Glaze et al. teaches that the server transmits updates to the workstations so that the workstations will have the latest information when match processing entered biodata.

Therefore, as called for by claims 1, 29, 31, 36 and 42, Fishbine et al. and Glaze et al. do not disclose receiving data from a central processor relating to a fingerprint image processed at the central processor and displaying that data on a display of a portable handheld device. Instead, in Fishbine et al., after the image information is processed at the central facility, the data relating to the processed image is sent to the mobile unit, such as a computer in the police squad car, and not to the portable fingerprint scanning apparatus 10 for subsequent display. The image displayed on the monitor 26 of Fishbine et al.’s fingerprint image capture device is that of a finger on the scanner 12 or a mug shot viewed by the camera 20. And in Glaze et al., a fingerprint image is not processed at a central location and then sent back to a portable handheld device for display. Rather, in Glaze et al., the fingerprint images are processed for a match at the individual workstations. The central

server of Glaze et al. does not process fingerprint images for a match. Instead, the server serves as a communications link to provide updates to the databases of the individual workstations where the match processing occurs.¹

Claim 16 specifies that the sensor, processor, and transmitter are located within a housing of the portable apparatus for identification and verification wherein the processor determines if a captured fingerprint image meets a minimum fingerprint quality level and a processor module enhances the fingerprint image prior to transmission. These features are not disclosed by Fishbine et al. and Glaze et al., nor any of the other references relied upon by the examiner.

Fishbine et al. does not, as stated by the examiner, disclose “a module operating within the process for the enhancement (digitizing and processing) of the fingerprint image prior to transmittal.” See, paragraph 9 of the Office Action. Rather, this digitizing and processing is done at Fishbine et al.’s mobile unit and not at the portable fingerprint scanning apparatus.

The terminal 28 of the portable fingerprint scanning apparatus 10 of Fishbine et al. controls whether a captured fingerprint image from the scanner 12 or the video camera 20 is transmitted to the mobile unit. The terminal 28 also transmits control signals via the wireless transmitter 30 to the mobile unit to initiate processing and digitizing of the images at the mobile unit. As stated in Fishbine et al.:

Terminal 28 also controls whether the image from fingerprint scanner 12 or video camera 20 is transmitted by wireless transmitter 30 to the mobile unit. Terminal 28 also transmits control signals via wireless transmitter 30 to the mobile unit to initiate processing and digitizing of the images in the mobile unit.

¹ During the interview, the handling examiner was asked where in the prior art were the last two steps of claim 1 disclosed. The examiner’s response was that these steps could be found at col. 4, lines 45-51 of Fishbine et al. However, Fishbine et al. only teaches there that after a fingerprint image is processed in the mobile unit, the image is transmitted to a base unit, such as a police station, for identity verification. There is no discussion in Fishbine et al., or, for that matter, any other reference, of receiving data from a central processor relating to a processed fingerprint image and displaying that data on a display of a portable handheld device.

(Col. 3, lines 30-36).

Thus, the digitizing and processing of the fingerprint images in Fishbine et al. are not done in the portable apparatus 10. Rather, this processing is done at the mobile unit which is located, for instance, in a police squad car.

No digital fingerprint data is available at the portable apparatus 10. Instead, the fingerprint data available at the portable apparatus is the video signal output of the image recorder 18. As clearly taught by Fishbine et al.:

The video signal output of image recorder 18 is also wirelessly transmitted by transmitter 30 to a mobile unit (not separately shown). When the operator desires to "capture" a fingerprint image being previewed on video monitor 26, the operator will actuate a key on terminal 28 which generates a signal transmitted by a transmitter 30 to the mobile unit that capture and processing of the fingerprint image should be initiated. . . . Upon receiving the signal from terminal 28, the mobile unit digitizes and processes the fingerprint image. . . . After image processing and compression in the mobile unit, the image can be transmitted wirelessly to a base unit at a central facility, such as a police station, for identity verification using an automated fingerprint identification system. .

...

(Col. 4, ,lines 33-51).

In Applicants' apparatus, the sensor, processor, and transmitter are all located within the housing of the portable apparatus for identification and verification. The processing of the fingerprint image in terms of enhancement and fingerprint quality are done by the processor in the portable apparatus. In contrast, no such processing is done in the portable fingerprint scanning apparatus 10 of Fishbine et al. Rather, the terminal 28 is used to communicate a scanned fingerprint image to the remotely located mobile unit where processing of the image may take place prior to transmission to a central facility.

Additionally, since claims 1, 16, 29, 31, 36, and 42 would not have been obvious in view of the cited references, the claims dependent therefrom cannot possibly have been rendered obvious by

the combination of Fishbine et al. and Glaze et al., either alone or in combination with other references.

Applicants' Information Disclosure Statement (IDS)

Applicants filed an IDS on August 11, 2005, citing various references. An initialed Form 1449 has not been received from the examiner. It is respectfully requested that the examiner provide an initialed Form 1449 form.

Conclusion

In view of the foregoing, it is submitted that all the claims are now in condition for allowance. Accordingly, allowance of the claims at the earliest possible date is requested.

If prosecution of this application can be assisted by telephone, the Examiner is requested to call Applicants' undersigned attorney at (510) 267-4106.

Please apply any other charges or credits to deposit account number 50-388 (Order No. IDTYP044).

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Respectfully submitted,
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